Coastal Impact Assistance Program

Project Title:

Closure of Breaches along Gulf Intracoastal Waterway (GIWW) in Terrebonne

This proposal represents a revision of the CWPPRA project TE-43 Bank Restoration of Critical Areas in Terrebonne from PPL 10.

Entity/Individual nominating the project:

Terrebonne Parish Consolidated Government

Contact Information (Name, Address, Telephone, Email):

Al Levron
Director of Public Works
Terrebonne Parish Consolidated Government
P.O. Box 2768
Houma, LA 70361
985-873-6407
985-873- 6409 Fax
allevron@tpcg.org

Total CIAP Funds Requested:

The total CIAP funds requested- $7,929,035 (see attached NRCS cost sheet). Total costs are based upon original NRCS engineering and design costs on TE-43 CWPPRA project.

Parish CIAP Funds Proposed:

Unknown at this time.

State CIAP Funds Requested:

Terrebonne Parish requests $7,929,035 for this project.

Infrastructure Funds Proposed:

There are no infrastructure funds proposed for this project.

Description and Location of Project:

This proposed CIAP project, Closure of Breaches GIWW Terrebonne, is located within the same general project area as CWPPRA Project TE-43 in the Terrebonne Basin, in Terrebonne Parish, Louisiana, along the south bank line of the GIWW from the Gulf South Pipeline to the St. Paul Bayou Oilfield (Figure 1). The project will close four (4) breaches along the south bank of the GIWW totaling 14,500 linear feet (Figure 2). From west to east along the GIWW the proposed closures are numbered – Segment 1- 1,500 ft., Segment 2a- 500 ft., Segment 2b- 4,500 ft., and Segment 6- 8,000 ft. (Figure 3, Figure 4). The breach closures engineered for this bank line (light weight aggregate core capped with rock) will provide immediate benefits to the adjacent thin-mat floating marshes by stopping water movement through these large breaches where water exchange now occurs.

Project Type : Type 1 and 4

This proposed project will be implemented for the conservation, restoration and protection of coastal area, including wetlands and the implmentation of a federally approved marine, coastal or comprehensive conservation management plan. Specifically, action Plan EM-6 – shoreline stabilization and induced deposition – of the Barataria-Terrebonne National Estuary Program.

Project Justification:

The width of the GIWW adjacent to the four (4) proposed breach closures ranges from 700 feet to almost 2,000 feet. This large area of open water allows for wave fetch from wind, currents, and boat traffic. These four (4) critical breaches are allowing water flow from the GIWW into and out of the fragile floating fresh marsh south of the GIWW. These direct hydrologic connections have destroyed adjacent floating marsh and are accelerating the breakup of thin-mat floats located south of these breaches and extending at least six (6) miles to the south (Figure 5). This area of thin-mat floating fresh marsh is quite unique and extremely productive supporting a wide variety of fish and wildlife species. The thin-mat floats in this area are 2"- 8" in thickness and floating on an unconsolidated organic muck. When protected from high velocity turbid water, the floats are usually surrounded by SAVs providing additional protection from wind and waves. When water is funneled through these breaches with increased velocity the floats eventually break into pieces and are exported from the marsh. This converts floating fresh marsh into open turbid water subject to increased export of unconsolidated organics and increased water depths (Figure 6).

This proposed project is fully engineered and free of issues. Elimination of these hydrologic connections will result in an immediate benefit to a large area of floating fresh marsh (approx. 30,000 acres). Maintaining this area as floating fresh marsh rather than allowing it to convert to open turbid water will also provide added protection to the Bayou Black Ridge located five (5) miles north. The size of this proposed project has been reduced to closing the four existing breaches (14,500 linear feet) with an estimated cost of 28% of the cost for the entire TE-43 project. Although the extent of shoreline protection is reduced, the area of floating marsh protected is

greater than the project size originally calculated. The sole landowner in the project area is Continental Land and Fur Company (CL&F). Their land management experience indicates that floating marshes are more intact when adjacent to a solid bank line than when subjected to water movement through breaches and washouts. This has been monitored and demonstrated for many years on CL&F property. Figure 7 shows the results of protection of a continuous bank along one side of a pipeline canal to the adjacent thin-mat floating marsh.

Closure of these breaches will reduce the high rate of breakup of the adjacent thin-mat floating marshes while other sources of funds are sought for long-term shoreline protection in between these structures. Status reports from the Mandalay Bank Protection Demonstration Project (TE-41) may result in a more economical method to protect the remaining banks.

If these breaches along the GIWW are not closed with this proposed CIAP project, the adjacent area of fragile thin-mat floating marshes will continue to deteriorate and the area will soon be converted from marsh to open turbid water. This project is consistent with the Coast 2050 specific regional ecosystem strategies for protecting and sustain the Terrebonne Basin's coastal resources: restoring swamps, restoring and sustaining marshes and protecting shorelines.

Project cost share :

Project cost shares are unknown at this time.

Project:	Project Name: GIWW Terrebonne	Date:	30-Mar-06	Revised:	30-Mar-06
Computed by:		*Project Priority List 15*			
Item No.	**Work or Material**	**Quantity**	**Unit**	**Unit Cost**	**Amount**
1	Foreshore Rock Dike	14,500	LF	$430	$6,235,000
2	(Mob/Demob Included in unit cost)				
3					
4					
5					
6					
7					
8					

ESTIMATED CONSTRUCTION COST **$6,235,000**

ESTIMATED CONSTRUCTION + 25% CONTINGENCY **$7,793,750**

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs

Engineering and Design:

Engineering	$0 (Phase I E&D Completed in TE-43 Project)
Geotechnical Investigation	$0
Hydrologic Modeling	$0
Data Collection	$0
Cultural Resources	$0
NEPA Compliance	$0

SubTotal: $0

	NMFS	NRCS	Other	Actual
Supervision and Administration	$0	$0	$0	$0

State Costs

Supervision and Administration (including PM, ecological review and engineering review) $0

Easements and Land Rights

Oyster Issues(# of Leases)	0 Leases	$0	
Land Rights		$100,000	
		SubTotal:	$0

Monitoring

Monitoring Plan Development	$0
Monitoring Protocal Cost *	$0

SubTotal: $0

* *Monitoring is now done through CRMS except on projects that an agency requests project specific monitoring and projects such as Barrier Island projects and Demo projects.*

Total Phase I Cost Estimate: **$0**

PHASE II

Federal Costs

Estimated Construction Cost +25% Contingency		$7,793,750	
Oyster Issues (# of Leased Acres)	0 Leased AC	$0	
		SubTotal:	$7,793,750
Supervision and Inspection	145 days @	$933.00 per day	$135,285
Supervision and Administration			$0

State Costs

Supervision and Administration $0

Total Phase II Cost Estimate: **$7,929,035**

TOTAL ESTIMATED PROJECT FIRST COST **$7,929,035**

Figure 1

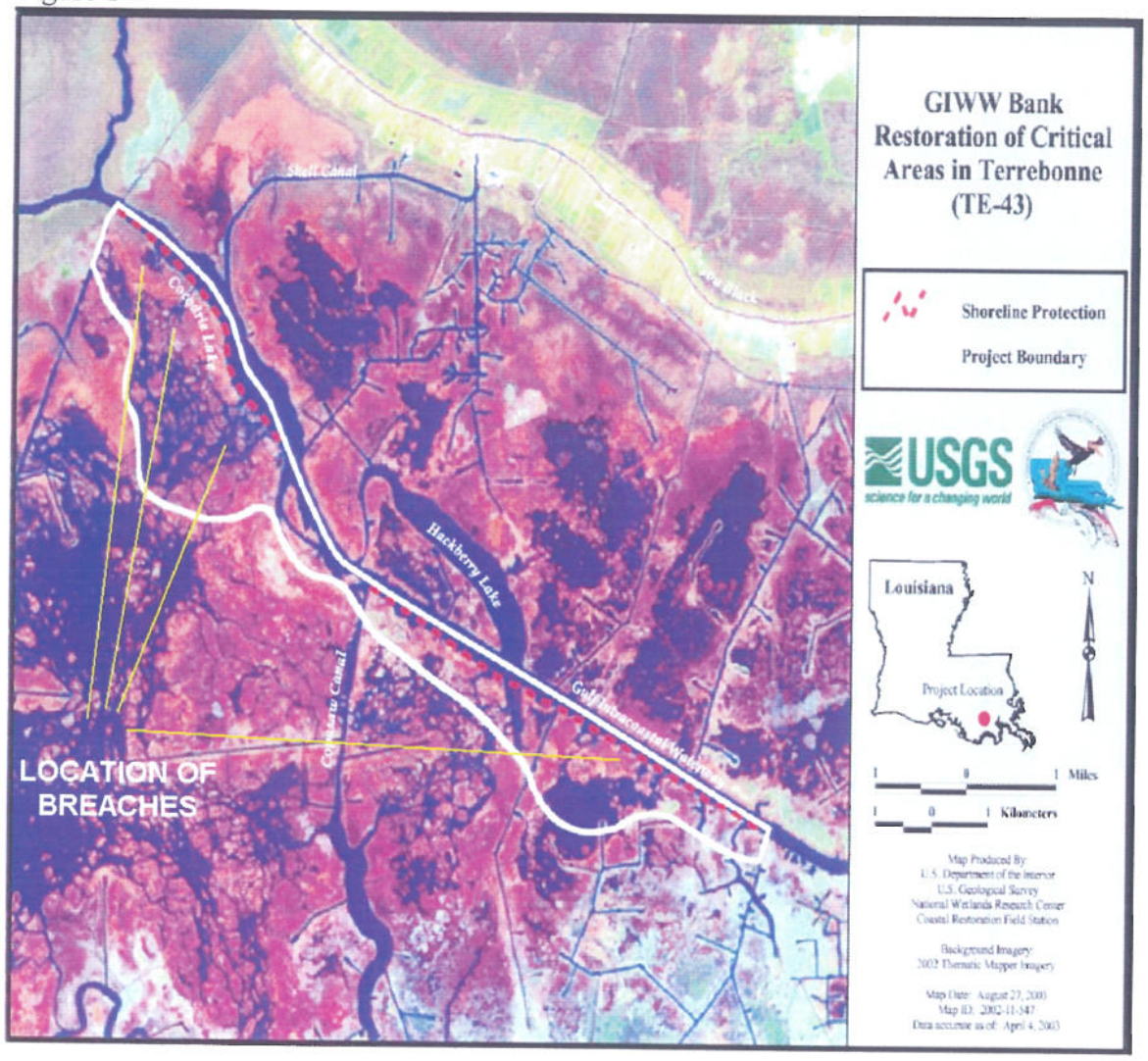

GIWW Bank Restoration of Critical Areas in Terrebonne (TE-43)
Shoreline Protection
Project Boundary
USGS
science for a changing world
Louisiana
Project Location
N
Miles
Kilometers
Map Produced By:
U.S. Department of the Interior
U.S. Geological Survey
National Wetlands Research Center
Coastal Restoration Field Station
Background Imagery:
2002 Thematic Mapper Imagery
Map Date: August 27, 2003
Map ID: 2002-11-547
Data accurate as of: April 4, 2003
Shell Canal
Caillou Lake
Hackberry Lake
Cocodrie Canal
Gulf Intracoastal Waterway
LOCATION OF BREACHES

FIGURE 2

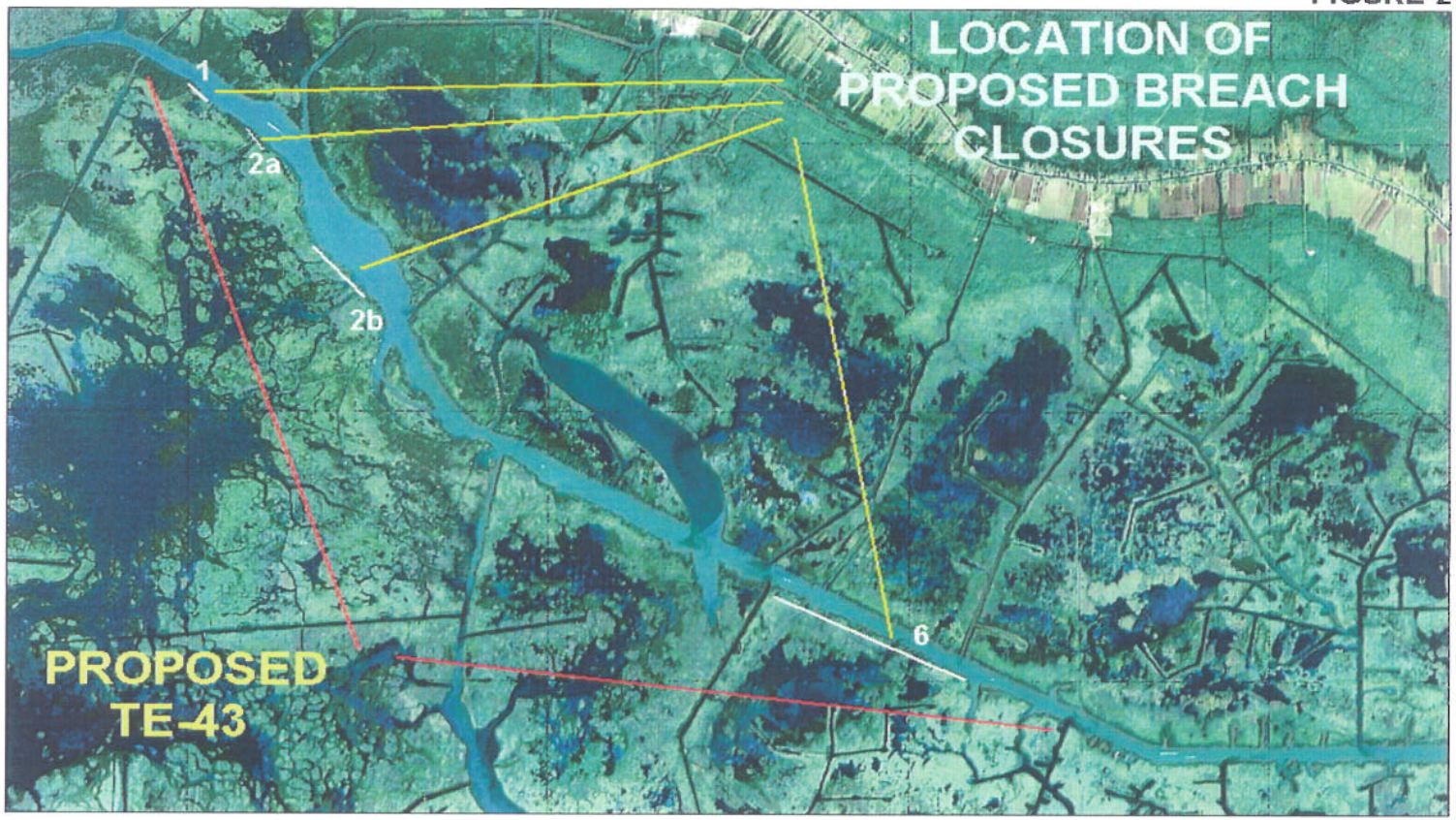
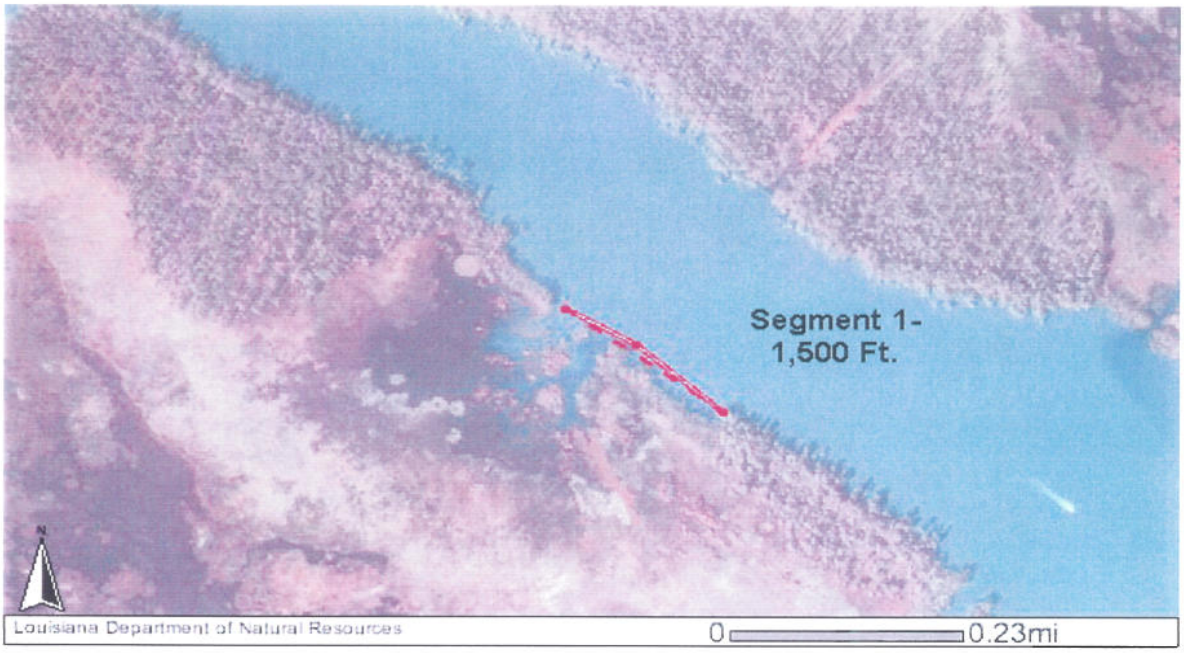

LOCATION OF PROPOSED BREACH CLOSURES
1
2a
2b
6
PROPOSED TE-43
MN (1.1° E)
mi
0 ½ 1 1½ 2 2½
Data Zoom 12-0

Figure 3- Proposed Breach Closures, Segments 1 and 2a.



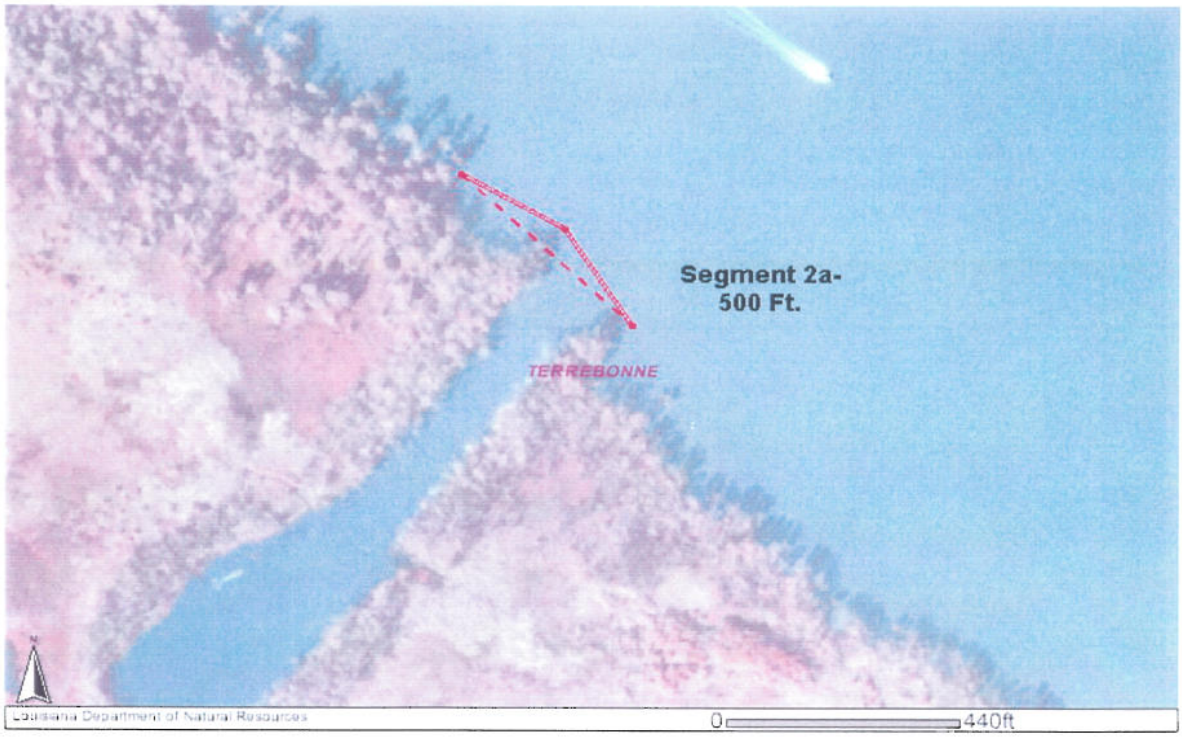
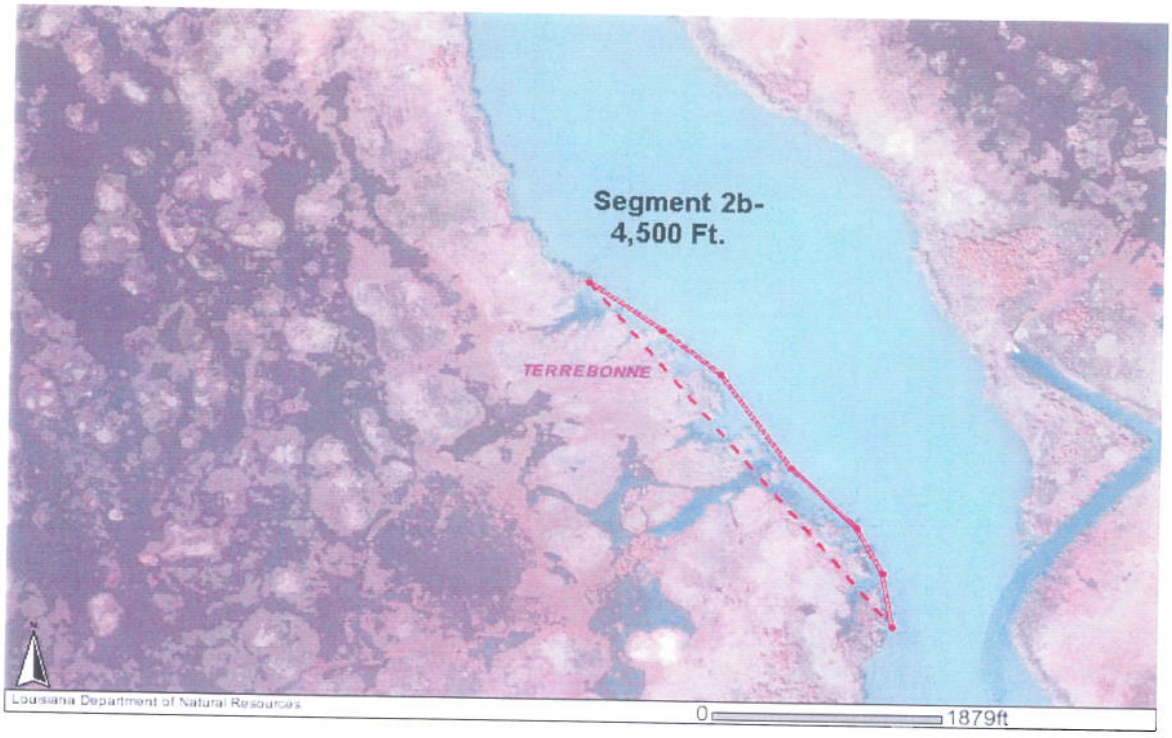


Figure 4- Proposed Breach Closures, Segments 2b and 6.



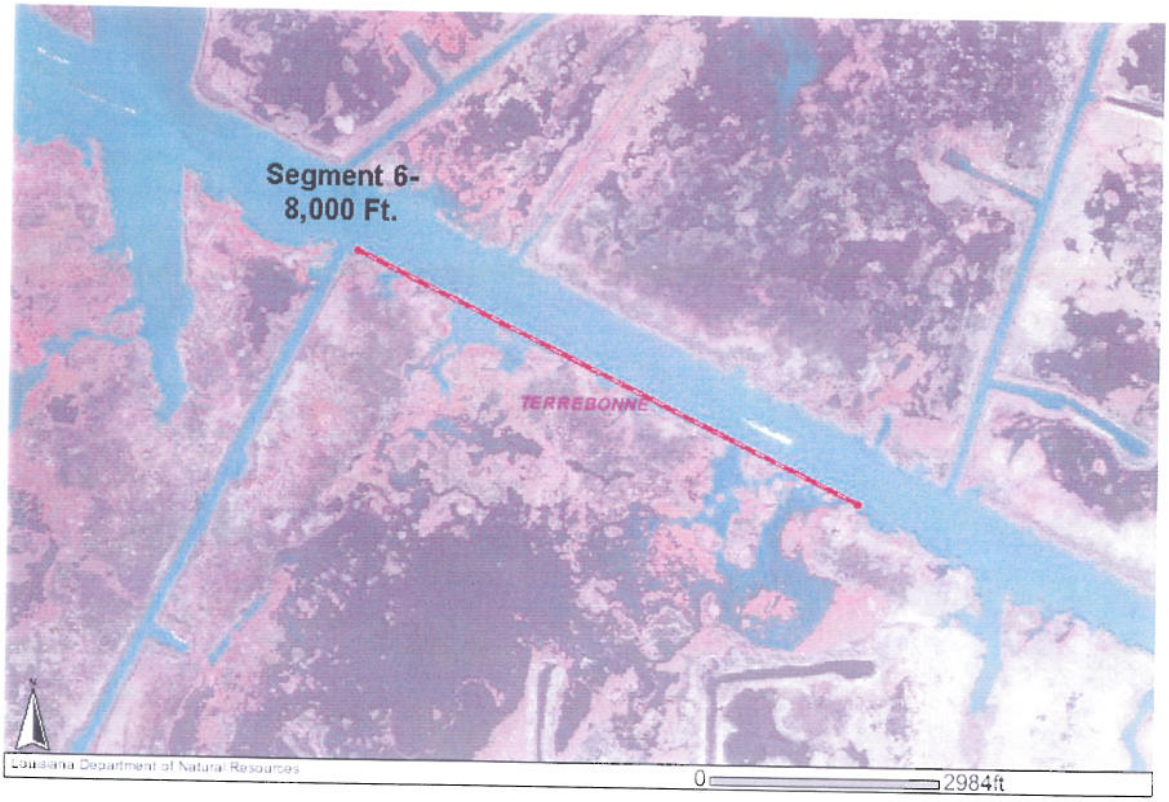


Figure 5


GIWW LOOKING SOUTH
BREACH CLOSURE- SEGMENT 2b
Note floating marsh breakup